

In re of: 10/507,936 GOULIAEV13

Amendments to the Specification:

Please amend the paragraphs beginning at page 32, line 21, as follows:

A: 5'-GCG ACC TGG AGC ATC CAT CGT **S** (SEQ ID NO:1)

B: 5'-GAG CAT CCA TCG **S** (SEQ ID NO:2)

C: 5'-GAC GAG CAT CCA TCG **S** (SEQ ID NO:3)

D: 5'-CTA GGG ACG AGC ATC CAT CG**S** (SEQ ID NO:4)

Please amend the paragraph beginning at page 34, line 13, as follows:

E: 5'-**X** CGA TGG ATG CTC GTC CCT AGA **YZ** (SEQ ID NO:5)

Please amend the paragraphs beginning at page 34, line 29, as follows:

A: 5'-GCG ACC TGG AGC ATC CAT CGT - acetyl (SEQ ID NO:1)

F: 5'- **X** ACG ATG GAT GCT CCA GGT CGC (SEQ ID NO:6)

Please amend the paragraphs beginning at page 37, line 7, as follows:

L: 5'-~~W~~CA TTG ACC TGA ACC ATG BTA AGC TGC CTG TCA GTC GGT ACT
ACG ACT ACG TTC AGG CAA GA (SEQ ID NO:7)

M: 5'-~~W~~CA TTG ACC TGA ACC ATG TBA AGC TGC CTG TCA GTC GGT ACT
TCA AGG ATC CAC GTG ACC AG (SEQ ID NO:8)

Please amend the paragraph beginning at page 38, line 23, as follows:

General procedure: The template oligo 5'-
BTCTTGCCCTGAACGTAGTCGTAGGTCGATCCGCGTTACCAGAGCTGGATGCTCGACAGGTCC
CGATGCAATCCAGAGGTCG (SEQ ID NO:9) (1 nmol) was mixed with the
oligos (L or M) loaded with a functional entity (1 nmol) and
amino oligo O in hepes-buffer (20 uL of a 100 mM HEPES and 1 M
NaCl solution, pH=7.5) and water (added to a final volume of
100 uL). The oligos were annealed to the template by heating
to 50 °C and cooled (-2 °C/ 30 second) to 30 °C. The mixture
was then left o/n at a fluctuating temperature (10 °C for 1
second then 35 °C for 1 second). The oligo complex was

attached to streptavidine by addition of streptavidine beads (100 uL, prewashed with 2x1 mL 100 mM hepes buffer and 1M NaCl, pH=7.5). The beads were washed with hepes buffer (1mL). The amino oligo was separated from the streptavidine bound complex by addition of water (200 uL) followed by heating to 70 °C for 1 minute. The water was transferred and evaporated *in vacuo*, resuspended in TEAA buffer (45 uL of a 0.1 M solution) and product formation analysed by HPLC (see Figure 5).

Please amend the paragraph beginning at page 39, line 7, as follows:

A) The top chromatogram show the reference amino oligo O: 5'-GAC CTG TCG AGC ATC CAG CTT CAT GGC TGA GTC CAC AAT GZ (SEQ ID NO:10). Z contain the modified nucleobase with an aminogroup, incorporated using the commercially available amino modifier C6 dT phosphoramidite (10-1039-90 from Glen research).

Please amend the paragraphs beginning at page 39, line 28, as follows:

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H: 5'-GAC CTG TCG AGC ATC CAG CTT CAT GGG AAT TCC TCG TCC ACA
ATG ~~XT~~ (SEQ ID NO:11)

Please amend the paragraphs beginning at page 40, line 20, as follows:

K: 5'-~~W~~CA TTG ACC TGT CTG CCB TGT CAG TCG GTA CTG TGG TAA CGC
GGA TCG ACC T (SEQ ID NO:12)

L: 5'-~~W~~CA TTG ACC TGA ACC ATG BTA AGC TGC CTG TCA GTC GGT ACT
ACG ACT ACG TTC AGG CAA GA (SEQ ID NO:7)

Please amend the paragraph beginning at page 41, line 20, as follows:

The template oligo 5'-

BTCTTGCTGAACGTAGTCGTAGGTCGATCCGCGTTACCAGAGCTGGATGCTCGACAGGTCC
CGATGCAATCCAGAGGTCG (SEQ ID NO:9) (1 nmol) was mixed with the
two thio oligos (K and L) loaded with the same functional
entity (S-Trityl-4-mercaptobenzoyl; 1 nmol) and the trisamine
oligo H (1 nmol) in hepes-buffer (20 uL of a 100 mM hepes and
1 M NaCl solution; pH=7.5) and water (added to a final volume

of 100 uL). The oligos were annealed to the template by heating to 50 °C and cooled (-2 °C/ 30 second) to 30 °C. The mixture was then left o/n at a fluctuating temperature (10 °C for 1 second then 35 °C for 1 second). The oligo complex was attached to streptavidine by addition of streptavidine beads (100 uL, prewashed with 2x1 mL 100 mM hepes buffer and 1M NaCl , pH=7.5). The beads were washed with hepes buffer (1mL). The trisamine scaffold oligo H was separated from the streptavidine bound complex by addition of water (200 uL) followed by heating to 70 °C. The water was transferred and evaporated *in vacuo*, resuspended in TEAA buffer (45 uL of a 0.1 M solution) and product formation analysed by HPLC (see Figure 6).